

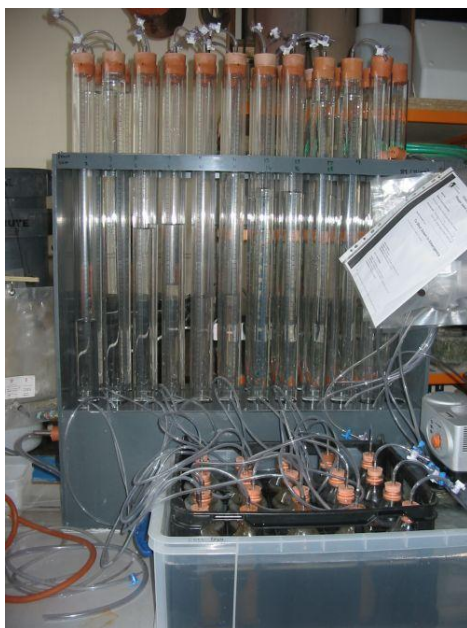


Measuring stability of digestates from AD of source-segregated biodegradable waste and manures

Project Staff	Principal investigator: Dr M Walker Named investigator: Prof. CJ Banks Associate investigator: Dr S Heaven Associate investigator: Dr Y Zhang
Start year	2009
Finish year	2009
Funding body	WRAP
Related website	

While anaerobic digestion (AD) of organic waste materials can provide environmental benefits in the production of renewable energy and/or biogas, further advantages can be realised if the digestate is applied to agricultural land, displacing the use of conventional energy intensive fertilisers. Defra has prepared a Publicly Available Specification (PAS) 110 which will be used to certify that anaerobic digestion residues are fit for this purpose.

Funded by the Waste Resources Action Programme (WRAP), the Bioenergy and Organic Resources Group led a consortium of 3 institutions, including The Open University and WRc, to develop the test which has now become part of PAS110 and confirms that a digestate is sufficient in terms of biological stability to ensure environmentally sound land application.



Test rig for method development

Test development

Building on the knowledge previously acquired by the research centre into the operation of biochemical methane potential (BMP) tests, the first part of the work was to develop and design a suitable test. The second part of this work was an inter-laboratory study into the robustness, repeatability, reproducibility and sensitivity of the previously designed test.

Results and recommendations were reported to WRAP in late July 2009 and the standard test is now in use. A follow-up study of the first two years of the test has been carried out in another WRAP-funded project.

Collaborators:

Open University
WRc

Publications

Walker M, Banks C. J., **Heaven S.**, Frederickson J, (2010) Development and evaluation of a method for testing the residual biogas potential of digestates OFW004-005. Waste and Resources Action Programme, January 2010. WRAP, Banbury, UK. pp 53.

